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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,347	12/09/2004	Roland Burk	016906-0344	2507
22428	7590	09/07/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			ALI, MOHAMMAD M	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/517,347	Applicant(s) BURK ET AL.	
	Examiner Mohammad M. Ali	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-16 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/09/06 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/09/04</u> | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "140" and "170" have both been used to designate first heat receiver. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "170" has been used to designate both first heat receiver and second heat receiver. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-9, 12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Scaringe (6,205,803). Scaringe discloses a thermal control method and apparatus comprising a refrigerant circuit 30", with at least one heat receiver high temperature cold plate, a heat emitter 34 with first condenser portion and second condenser portion, characterized in that a plurality of functionally identical heat exchangers with other electronic cold plate working relatively low temperature than the high temperature cold plate (the high temperature cold plate works relatively higher pressure than the other electronic cold plates having TXV); the higher temperature cold plate, a filter dryer disposed at the downstream of the first heat receiver (higher temperature cold plate); the first heat receiver (higher temperature cold plate) makes a composite unit with the heat emitter connected through a bypass line with a bypass valve. Regarding claim 9, the higher temperature cold plate being disposed between the first condenser portion and second condenser portion of the same closed sub circuit

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and having no expansion element in the sub circuit is regarded on the same pressure level. See Fig. 9 and column 5, line 44 to column 6, line 55.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 10, 13-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scaringe in view of Voss (5,220,809). Scaringe discloses the invention substantially as claimed as stated above. However Scaringe does not disclose secondary cooling circuit and air conditioning system for a motor vehicle. Voss teaches the use of a secondary circuit with chill block 10 for cooling electronic components of a controller 20 in a refrigerant system 12 for purpose of cooling electronic component with a saturated vapor at a heat-receiving element 10. See Fig. 1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal control method and apparatus of Scaringe in view of Voss such

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that a secondary circuit and a system for vehicle air condition could be provided in order to chill an electronic component and run a motor vehicle air conditioner. Regarding claim 13, any heat receiver or evaporator can be provided with a fan or blower and it a known feature in the refrigerant art. Regarding claim 10, Fig. 2 discloses that chill bloc 10 is geodetically lower than the heat emitter 14.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scaringe in view of Gehring et al., (5,031,411). Scaringe discloses the invention substantially as claimed as stated above. However Scaringe does not disclose one compression element and/or at least one expansion element forming a heat exchanger structure unit. Gehring et al., teach the use of a compression element 12 and/or at least one expansion element 80 forming a heat exchanger structure unit in a heat exchanging system for the purpose of cooling air flow 68r at a heat receiving element 60. See Fig. 6. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal control method and apparatus of Scaringe in view of Gehring et al., such that a one compression element and/or at least one expansion element could be provided in order to cool an air flow in heat receiving element.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scaringe in view of Scott (4,193,270). Scaringe discloses the invention substantially as claimed as stated above. However Scaringe does not disclose operation of heat emitter and first heat receiver and second heat receiver at three different pressure levels. Scott teaches the operation of heat emitter 3, first heat receiver 18 and second heat receiver 17 and

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third heat receiver 16 operating at four different pressure levels in a refrigeration system for the purpose of load sharing according to the requirement of different cooling load.

See Fig. 1. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal control method and apparatus of Scaringe in view of Scott such that heat emitter and heat receivers could be operated at different pressure levels in order to meet the different cooling loads.

Allowable Subject Matter

Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad M. Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MOHAMMAD M. ALI
PRIMARY EXAMINER